

**MWI 8550.5  
REVISION C**

**EFFECTIVE DATE: December 21, 2005  
EXPIRATION DATE: December 21, 2010**

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# **MARSHALL WORK INSTRUCTION**

**AS01**

## **HAZARDOUS MATERIAL MANAGEMENT**

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Marshall Work Instruction AS01		
Hazardous Material Management	MWI 8550.5	Revision: C
	Date: December 21, 2005	Page 2 of 8

### DOCUMENT HISTORY LOG

Status (Baseline/ Revision/ Canceled)	Document Revision	Effective Date	Description
Baseline		6/16/02	
Revision	A	6/24/2004	Added language throughout document to specify use of the Marshall Retail Store for ordering chemicals. Restructured Section 6.2.
Revision	B	10/22/2004	This revision is in response to an action from NASA Headquarters requiring specific verbiage and updating document references
Revision	C	12/21/2005	This revision updates organization codes from AD to AS; removes the phrase "out of shelf life" from paragraph 6.4.5; updates the document in general to reflect the Center's requirements for ordering and barcoding chemicals. Added paragraph 6.5.5 to address the use of expired chemicals as required by NCR 693.

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Marshall Work Instruction AS01		
Hazardous Material Management	MWI 8550.5	Revision: C
	Date: December 21, 2005	Page 3 of 8

## 1. PURPOSE

This Marshall Work Instruction (MWI) establishes instructions for maintaining an inventory of hazardous materials (i.e., chemicals) used and/or stored onsite. This MWI also establishes a requirement for all employees, Government and contractor, to either order chemicals through the Marshall Retail Store or send their incoming chemicals through MSFC Central Receiving for barcoding requirements. This allows the Center to maintain a more accurate chemical inventory and maintain a safer work environment.

## 2. APPLICABILITY

This MWI applies to Marshall Space Flight Center (MSFC) employees and contractors who use or store chemicals onsite and/or maintain a chemical inventory. Construction of Facilities, Facilities Work Requests, Credit Card Construction (for Facilities personnel only), Janitorial Services, Cafeteria Operations, Auto Service Center, and Hobby Shops are excluded from the chemical approval cycle and the Central Receiving requirements as defined in sections 6.1 and 6.2.

## 3. APPLICABLE DOCUMENTS

- 3.1 MPR 1840.2, "MSFC Hazard Communication Program"
- 3.2 MPR 1840.3, "MSFC Hazardous Chemicals in Laboratories Protection Program"
- 3.3 MPR 3410.1, "Training"
- 3.4 MPR 8500.1, "MSFC Environmental Management Program"
- 3.5 MWI 4300.1, "Disposal Turn-Ins/Reutilization Screening"
- 3.6 MWI 5100.1, "Initiating Procurement Requisitions"
- 3.7 MWI 5113.1, "Governmentwide Commercial Purchase Card Operating Procedures"
- 3.8 MWI 8550.1, "Waste Management"

## 4. REFERENCES

None

## 5. DEFINITIONS

- 5.1 The definitions in MPR 8500.1 are applicable.

Marshall Work Instruction AS01		
Hazardous Material Management	MWI 8550.5	Revision: C
	Date: December 21, 2005	Page 4 of 8

5.2 Hazardous Material. Any material/chemical defined as hazardous under 29 CFR 1910.120(c) and includes material presenting health and/or physical hazard; such material has one or more toxic, flammable, corrosive, or reactive properties.

## 6. INSTRUCTIONS

The Environmental Engineering and Management Office (EEMO) Support Contractor (544-4772 or 544-6007) is available to assist personnel in evaluating onsite resources to determine if their chemical requirements can be met by obtaining chemicals from other users. The EEMO Support Contractor is also available to assist in evaluating and determining the availability of less hazardous chemical substitutes.

### 6.1 Chemical Approval Process

6.1.1 EEMO maintains a database of chemicals that have been reviewed and pre-approved for purchase. Before purchasing any chemical that has not been pre-approved, the requestor shall have their chemical purchase request reviewed and approved by EEMO and Occupational Medicine and Environmental Health Services (OMEHS). This includes items procured in accordance with the process described in MWI 5100.1, "Initiating Procurement Requests," and MWI 5113.1, "Governmentwide Commercial Purchase Card Operating Procedures." Chemicals purchased through the Marshall Retail Store automatically go through this review/approval process. (Note: The EEMO Support Contractor is required to issue approval/disapproval within 48 hours of request).

6.1.2 Chemicals pre-approved for purchase may be viewed at:

[http://eemo.msfc.nasa.gov/environmental/haz\\_mat/msds\\_search.htm](http://eemo.msfc.nasa.gov/environmental/haz_mat/msds_search.htm).

NOTE: The purchaser should enter the "Manufacturer Name" or "Chemical Name" in the Query Form and click the Search button. Look under the "Approval Code" column for the result. An Approval Code of [A] indicates the product is approved for purchase and no notification is required to EEMO or OMEHS. An Approval Code of [X] denotes that the product is restricted and requires approval prior to purchase.

6.1.3 If the chemical requires approval, contact the EEMO Support Contractor at 544-4772 or 544-6007.

6.1.4 The chemical being reviewed for approval is evaluated for the following:

- Potential effects to air and water permits.
- Additional reporting requirements for extremely hazardous substances.
- Ozone depleting substances (these shall be phased out by 2010).
- Additional approvals required, if necessary.
- Potential alternative chemicals, if in non-critical application.

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Marshall Work Instruction AS01		
Hazardous Material Management	MWI 8550.5	Revision: C
	Date: December 21, 2005	Page 5 of 8

6.1.5 The user shall ensure that any chemical request obtained from Excess Reutilization Screening (surplus chemicals) be reviewed and approved or disapproved by EEMO in accordance with MWI 4300.1, "Disposal Turn-ins/ Reutilization Screening."

6.1.6 For any chemical(s) not ordered through the Marshall Retail Store, the purchaser shall fax the chemical procurement request to EEMO Support Contractor at 544-8582 for review and approval/disapproval. (Note: The EEMO Support Contractor is required to issue approval/disapproval within 48 hours of request).

6.1.7 If any purchase request is disapproved, the requestor shall be notified as to reasons why. Replenishing PREVIOUSLY APPROVED stock shall be excluded from the review/approval process. (NOTE: Under normal circumstances, once a chemical is approved, it is added to the list of approved chemicals and does not have to be approved again).

6.1.8 If the requestor is not satisfied with the disapproval, requestor may elevate the request to the EEMO Manager and then to the Office of Center Operations Director, as necessary.

## 6.2 Chemical Purchasing

6.2.1 Employees shall determine the appropriate amount of chemical for the project and order chemicals in corresponding container sizes to prevent ordering excess amounts. Containers shall be shatterproof, where applicable. If proper container size is not available, the user may request that the required size be available through the Marshall Retail Store. Procurement of chemicals shall be in accordance with MWI 5100.1, "Initiating Procurement Requisitions," where applicable.

6.2.2 All onsite personnel are encouraged to order chemicals through the Marshall Retail Store (430-4316) whenever possible. This process ensures that the chemical is shipped to MSFC Central Receiving and bar-coded for inventory. By barcoding all incoming chemicals, MSFC is able to maintain a more accurate chemical inventory and provide a safer work environment.

6.2.3 Chemical purchases made through the SAP Core Financial System shall have the correct order/document type (NASA Hazardous Purchase Request [PR]). By clicking on the drop-down menu within the appropriate field of the order/document type on the PR screen, the user may select the "NASA Hazardous PR" which assures that the PR flows through the appropriate approval levels. It is imperative that the user select the correct order/document type to ensure the appropriate approvals are obtained. All supporting documents (i.e., Material Safety Data Sheet, etc.) shall be attached to the SAP PR.

6.2.4 For chemicals not ordered through the Marshall Retail Store or SAP Core Financial, the purchaser (Government and contractor) shall ensure that the incoming chemical is routed through MSFC Central Receiving upon arrival for barcoding and inventory. If for some reason the chemical cannot or should not be routed through Central Receiving, the purchaser shall

Marshall Work Instruction AS01		
Hazardous Material Management	MWI 8550.5	Revision: C
	Date: December 21, 2005	Page 6 of 8

contact the EEMO Support Contractor (544-4772 or 544-6007) to ensure the chemical gets inventoried.

6.2.5 Chemicals found onsite without a barcode shall be subject to an environmental finding reported in SHEtrak against the responsible organization.

### 6.3 Chemical Use

Employees using chemicals shall:

6.3.1 Ensure that empty product containers are completely emptied and disposed of as described in MWI 8550.1, "Waste Management." Note: If possible, rotate chemical inventory such that oldest chemicals are used first.

6.3.2 Dispose of spent (used) chemicals into waste accumulation containers when possible. All excess and/or unwanted chemicals shall be turned in for disposal in their original containers along with the material safety data sheet(s) (MSDS) as outlined in MWI 8550.1, "Waste Management." If an MSDS is unavailable onsite, the user shall contact the manufacturer and request the MSDS. If the manufacturer is out of business, the user shall contact another manufacturer of the same chemical to obtain an equivalent MSDS.

6.3.3 Dispose of chemicals and containers once the container has lost its structural integrity.

6.3.4 Be familiar with the hazards of the chemicals in their work area and wear appropriate personal protective equipment when handling the material per MPR 1840.2, "MSFC Hazard Communication Program."

6.3.5 When scheduling a move via the Service Request System, note in the justification section that "movement of chemicals is required."

### 6.4 Chemical Storage

Employees storing chemicals shall:

6.4.1 Ensure that product containers are properly labeled, segregated, and MSDSs are readily available per MPR 1840.2, "MSFC Hazard Communication Program." Chemical segregation guidelines are provided in MPR 1840.3, "MSFC Hazardous Chemicals in Laboratories Protection Program." If an MSDS is not available, the MSFC user organization shall obtain one as soon as possible or turn in the chemical for waste disposal in accordance with MWI 8550.1, "Waste Management."

6.4.2 Restrict access to chemical storage areas to authorized personnel only.

6.4.3 Ensure that product containers/drums are sealed when not in use.

Marshall Work Instruction AS01		
Hazardous Material Management	MWI 8550.5	Revision: C
	Date: December 21, 2005	Page 7 of 8

6.4.4 Regularly inspect all chemical storage areas for leaking or severely corroded containers and unneeded or unwanted products (refer to section 6.3 for disposal). Employees shall promptly correct all deficiencies noted during inspections. Uncorrected deficiencies shall be recorded as findings against the user organization in SHEtrak.

6.4.5 For chemicals used in non-space flight applications, determine (when necessary) whether the chemical(s) may be used beyond the manufacturer's stated shelf life for that chemical. This determination is left to the user. For out-of-shelf-life chemicals used in space flight applications, the user shall comply with requirements identified in MPD 1280.1, "Marshall Management Manual."

## 6.5 Chemical Inventory Reporting

6.5.1 The MSFC chemical inventory is maintained through the barcode system. Personnel purchasing chemicals or bringing chemicals onsite shall ensure that each chemical is routed through MSFC Central Receiving to receive a barcode. In cases where this is not feasible, personnel shall contact the EEMO Support Contractor (544-4772 or 544-6007) to ensure the chemical gets inventoried.

6.5.2 Personnel (Government and contractor) responsible for maintaining a chemical inventory are the points of contact (POC) for EEMO for inventory reporting. The POCs shall: (a) Annually attend training provided by EEMO; (b) report and maintain inventories of hazardous chemicals used and/or stored onsite; (c) review, edit, and complete an annual chemical inventory for organization activities or as requested; (d) ensure that all stored chemicals are barcoded; (e) contact the EEMO Support Contractor (544-4772 or 544-6007) when a barcode is needed. The POC prepares and submits a complete hazardous chemical inventory to EEMO for the organization as requested.

6.5.3 EEMO shall inspect MSFC user organizations' inventory of chemicals periodically to verify accuracy of reported chemicals. Discrepancies may be documented as environmental findings and reported in SHEtrak. The MSFC user organizations shall take immediate corrective action regarding any discrepancies found during routine environmental inspections. (Note: The "MSFC user organization" includes the contractors within that organization).

6.5.4 EEMO shall maintain the MSFC chemical inventory and provide training as required.

6.5.5 Users shall utilize MSFC Form 4476, "Chemical Container Barcode Collection Sheet," for managing their empty chemical containers. Completed forms shall be submitted to EEMO in a timely manner.

## 7. NOTES

None

Marshall Work Instruction AS01		
Hazardous Material Management	MWI 8550.5	Revision: C
	Date: December 21, 2005	Page 8 of 8

## 8. SAFETY PRECAUTIONS AND WARNING NOTES

See section 6.3.

## 9. RECORDS

9.1 Chemical Inventory Training records shall be maintained in accordance with MPR 3410.1, "Training."

9.2 Chemical inventory records shall be maintained by EEMO, retained for at least 5 years, then destroyed as necessary, in accordance with NASA Records Retention Schedule (NRRS) 8/43/A/1.

9.3 Compliance inspection and/or audit findings shall be maintained within the SHEtrak database, retained for 7 years after closure, then destroyed as necessary, in accordance with NRRS 1/26.5/A.

## 10. PERSONNEL TRAINING AND CERTIFICATION

All personnel who use hazardous chemicals are encouraged to complete the Chemical Inventory training. All personnel responsible for maintaining chemical inventory or purchasing chemicals for their organization or assigned area shall attend this training in accordance with MPR 8500.1. Supervisors are responsible for ensuring that employees receive training per MPR 3410.1.

## 11. FLOW DIAGRAM

None

## 12. CANCELLATION

MWI 8550.5B dated October 22, 2004

*Original signed by  
Robin N. Henderson for*

David A. King  
Director